



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/613,852	07/03/2003	Chengbao Wang	P1723US01 (28068-00037)	7245
22267	7590	02/03/2006	EXAMINER	
CROWE AND DUNLEVY, P.C. 20 NORTH BROADWAY SUITE 1800 OKLAHOMA CITY, OK 73102-8273			NEUDER, WILLIAM P	
			ART UNIT	PAPER NUMBER
			3672	

DATE MAILED: 02/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/613,852	Applicant(s) WANG, CHENGBAO	
	Examiner William P. Neuder	Art Unit 3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16, 18 and 19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5-10, 13-16 and 18 is/are rejected.
- 7) ☒ Claim(s) 3, 4, 11, 12 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 18 is rejected under 35 U.S.C. 102(b) as being anticipated by Thomas et al EP 0322958 (applied in previous office action).

Thomas discloses a submersible pumping system for pumping wellbore fluids. A shroud 20 has a connection end and an intake end. The connection end is connected to the outer wall of the pump intake 37 (see fig. 2A). A pump connector plate (unnumbered in fig. 2A, having bolts therethrough) is connected to the top of the pump intake. A sealing ring (unnumbered, seen in figs. 2A and 4) is disposed between the pump intake, the shroud and the pump connector plate.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

Art Unit: 3672

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1,2,5-10 and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas et al (EP 0322958) in view of Welford et al 4,342,538 or Vesey et al (5,551,708).

Thomas et al discloses a submersible pumping system for pumping wellbore fluids. A motor 11, a pump assembly 10 connected to the motor and a shroud 20 connected to the pump assembly are provided. The shroud has a connection end (figure 2A) and an intake end (figure 2B). As seen in figure 1, the shroud encompasses the motor. A sealing ring (unnumbered) seen in figures 2A and 4 prevents wellbore fluid from entering the shroud at the connection end. Thomas discloses all of the claimed features except for a retaining ring that holds the sealing ring in place. While it is considered probable that Thomas et al has some means for holding or fixing the shroud 20 with the sealing ring to the pump intake, both Welford et al and Vesey et al teach that it is known to attach shrouds to shafts with the use of sealing rings and retaining rings. It would have been considered obvious to provide Thomas et al with a retaining ring to hold the sealing ring and shroud in place as taught by either Welford et al or Vesey et al since some means of attaching the shroud to the sealing ring and pump intake must be present and Welford and Vesey teach that retaining rings to attach sealing rings to shrouds is one known way of attachment. As to claims 2 and 10, figure 2A shows the shroud attached to the pump intake. As to claims 5 and 13, the pump 10 is located

above the motor and draws the wellbore fluid past the motor. As to claims 6 and 14, the shroud extends below the motor assembly. As to claims 7 and 15, since the sealing ring and shroud are attached to the pump assembly, so would the retaining ring. As to claims 8 and 16, while Thomas et al does not specifically disclose the shroud being formed from sheet metal, the cross-hatching discloses metal and the use of sheet metal to form pump shrouds is common, it is believed that the shroud of Thomas et al is sheet metal.

Allowable Subject Matter

Claims 3,4,11,12 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments filed 12/19/05 have been fully considered but they are not persuasive. Applicant argues that there is no prima facie case of obviousness. Applicant argues that there is no motivation to combine Wolford or Vesey because both of these references teach connecting a sealing ring to a pump shaft by use of a retaining ring. Thomas et al clearly shows connection of the sealing ring to the pump intake, but does not specifically disclose how the sealing ring is attached to the shroud and the pump intake. While both Wolford and Vesey teach connection of a sealing ring to a shroud and pump shaft by use of a retaining ring, they more broadly teach attachment of a sealing ring to a shroud and a pump by use of a retaining ring. It is the examiner's position that it would be within one of ordinary skill in the art to look to

Wolford or Vesey for a means to attach a sealing ring to a pump and shroud. These references are considered to teach that one known way of attaching a sealing ring to a shroud and pump is by use of a retaining ring. Since addition of a retaining ring to the device of Thomas et al would not destroy the teachings of Thomas, it is believed obvious to attach the sealing ring of Thomas to the pump intake and shroud by use of a retaining ring. Applicant further argues that the shrouds of Wolford and Vesey are completely unrelated to shrouds connected to the exterior of downhole pumping systems. While this is true, Thomas et al clearly shows the type of shroud being claimed by applicant. I am using Wolford or Vesey only to teach attaching a sealing ring by use of a retaining ring. With respect to applicant's arguments concerning claims 4 and 12, these claims are now indicated as being allowable.

Applicant's arguments with respect to claim 18 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William P. Neuder whose telephone number is 571-272-7032. The examiner can normally be reached on Tuesday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



William P Neuder
Primary Examiner
Art Unit 3672

W.P.N.